

CF83-E-F Government-Grade Fisheye Camera

Expansive 180° Coverage with Detailed 12.5MP Resolution for Government Deployments



Overview

The CF83-E-F government-grade fisheye camera features a large 1 / 1.6" progressive CMOS image sensor and 12.5MP resolution for detailed image quality amid varying lighting conditions and inclement weather. The CF83-E offers wide-angle, 180-degree coverage for maximum visibility, yet is built to minimize classic fisheye distortion. The CF83-E-F also includes FIPS 140-validated encryption, has FedRAMP Ready status at the Moderate impact level, and is both TAA and FY2019 NDAA compliant – essential compliance criteria for government-grade deployments. The CF83-E-F is compatible with the standard Verkada Command platform, as well as Command hosted in AWS GovCloud.

The CF83-E-F also includes an onboard CV72S Ambarella processor for advanced analytics like AI-powered search, line crossing, and person of interest (POI) detection. The CF83-E-F offers five different viewing modes: digital pan-tilt-zoom (ePTZ), panoramic, 2-way, 3-way, and 4-way split, which make it ideal for providing overview coverage of large areas like open atriums, long corridors, and exterior building walls, all from a single install point.

The CF83-E-F is built with an in-house industrial design for durability and streamlined installation. It features a robust metal exterior with an IP66/67 weather rating and IK10 impact protection, ensuring reliable performance in harsh environments. The CF83-E F's design streamlines installation and large fleet deployments with features such as captive screws that remain attached to the mounting plate, a latch-based cable gland for easy PoE threading, a three-LED light status indicator, a built-in bubble level for precise alignment, and physical and digital mute switches to easily enable or disable audio.

Key features

Excellent image quality

- Large 1 / 1.6" progressive CMOS image sensor
- 12.5MP resolution
- 20 meters / 66 feet of IR range for nighttime viewing

Extensive coverage and monitoring

- 180-degree field of view
- ePTZ, panoramic, and split viewing modes for enhanced live monitoring of large areas

Government-Grade Security

- Meets the FIPS 140 standard, as validated by NIST
- FedRAMP Ready status at the Moderate impact level as designated by the Federal Risk and Authorization Management Program
- TAA and FY2019 NDAA compliant

Advanced analytics

- Onboard CV72S Ambarella processor enables people and vehicle analytics
- Person of interest (POI) alerts for proactive monitoring

Hybrid cloud architecture

- Onboard storage and processing helps reduce bandwidth consumption, and enables coverage at scale
- 30 - 120 days (512GB - 3TB) of onboard storage
- Redundant cloud backup and unlimited cloud-based archiving of footage

Durability and weather protection

- Robust metal housing
- IP66/67 weather rating and IK10 impact rating
- Operability between -40°C to 50°C / -40°F to 122°F



CF83-E-F

Tech Specs

Camera features

Image Sensor	1/1.6" Progressive CMOS	Shutter Speed	1/120 sec. to 1/32000 sec.
Sensor Resolution¹	12.5MP (3536 x 3536); resolution (3520 x 3520)	Day/Night	IR-cut filter for day and night function
Lens Type	Fixed	IR Cut Filter	Yes
Focal Length	1.7mm	IR Range	20m / 66ft
Aperture	F2.0	Minimum Illumination	0.009 lux @ F1.9 (Color) 0 lux with IR Illuminators on
Iris	Fixed	Onboard Storage	Capacity: From 512GB to 3TB Card: MicroSD, SDXC
Field of View	Horizontal: 180° Vertical: 180° Diagonal: 180°	CPU	Ambarella CV72S66

Standard video settings

Compression	H.265, H.264	Historical Video Settings	Adaptive quality ¹
Frame Rate²	24fps	WDR Technology	120dB dynamic range, true WDR, dual exposure
Live Streaming Settings	High quality (HQ): Up to 4,500 Kbps (default) Standard quality (SQ): Up to 600 Kbps		

Standard audio settings

Audio	Supported	Interface	Built-in microphone
Audio Capacity	One-way audio	Effective Range	5m / 16ft

Power and network

Power Input³	With IR: IEEE 802.3at Type 2 PoE+ Extended temperature range: IEEE 802.3at Type 2 PoE+	Connectivity	RJ-45 cable connector for network/ PoE connection; 10 / 100 / 1000 Mbps
Power Consumption³	With IR: 43-57V, 0.46-0.34A, 19.5W Without IR: 43-57V, 0.22-0.17A, 9.5W Extended temperature range: 43-57V, 0.58-0.44A, 24.8W	RTSP	RTSP 1.0 RFC 2326 Max concurrent streams: 2 Audio support: No

1. All our cameras record in "adaptive quality," capturing both standard (SQ) and high quality (HQ) streams. SQ video is stored up to the amount of retention specified by the customer. The amount of HQ video stored on the camera will depend on the amount of motion detected by the camera over time. To learn more, visit our website:

<https://docs.verkada.com/docs/adaptive-quality-recording-whitepaper.pdf>

2. Frame rate can be adjusted by support.

3. Extended temperature range includes operating temperatures below -10°C / 14°F and assumes IR will be enabled.



CF83-E-F

Tech Specs

General

Operating Temperature	-40°C to 50°C / -40°F to 122°F	LED Indicator	System power, status indicator, and debug indicator
Humidity	0 to 90%	Warranty	10 Years
Certifications	FCC, ICES, IK10 impact rating, IP66/67 weather rating, FIPS 140-2 validated, TAA and FY2019 NDAA compliant	Included Accessories	Screw packs, mount plate with leveler, cable sealing rubber for 6.5-7.5mm, conduit adapter, T10 security driver

Mechanical

Weight	Camera: 1368g / 48.25oz Mount plate: 196g / 6.91oz	Body	Aluminum, plastic dome trim
Dimensions	Ø: 155.0mm / 6.10in, H: 76.2mm / 3.00in with mount plate Ø: 155.0mm / 6.10in, H: 69.2mm / 2.72in without mount plate		

Dimensions



Software capabilities

Alerts	Camera status, motion detection, people detection, vehicle detection, person of interest detection, crowd detection, AI-powered alerts	Streaming and Storage	Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP
People Analytics	People search, attribute search, face search, motion search, trajectory analysis ⁴ , selective face blurring, AI-powered search	Sharing and Privacy	Live links, privacy regions, audit log
Vehicle Analytics	Vehicle search, attribute search, motion search, trajectory analysis ⁴ , AI-powered search		

4. Trajectory analysis is supported in four-way split, panoramic, and ePTZ circle mode.



Ordering Information

CF83-E-F pricing

Model Number	MP ¹	WDR	Lens	IR Range	Onboard Storage	Maximum SQ Onboard Retention ¹	People/ Vehicle Analytics	Cost (MSRP) ^{USD}
CF83-512E-HW-F	12.5MP	✓	Fixed	20m / 66ft	512GB	30 Days	✓	\$1,999
CF83-1TBE-HW-F	12.5MP	✓	Fixed	20m / 66ft	1TB	60 Days	✓	\$2,799
CF83-2TBE-HW-F	12.5MP	✓	Fixed	20m / 66ft	2TB	90 Days	✓	\$4,099
CF83-3TBE-HW-F	12.5MP	✓	Fixed	20m / 66ft	3TB	120 Days	✓	\$5,399

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Ordering Information

Video Security Cloud License pricing (New/Capacity Increase)

Model Number	Description	Cost (MSRP) USD
LIC-CAM-1Y-CAP	1-Year Camera License, Capacity Increase	\$219
LIC-CAM-3Y-CAP	3-Year Camera License, Capacity Increase	\$599
LIC-CAM-5Y-CAP	5-Year Camera License, Capacity Increase	\$999
LIC-CAM-10Y-CAP	10-Year Camera License, Capacity Increase	\$1,999
LIC-CAM-1Y-CAP-G	1-Year Camera License for Government, Capacity Increase	\$329
LIC-CAM-3Y-CAP-G	3-Year Camera License for Government, Capacity Increase	\$899
LIC-CAM-5Y-CAP-G	5-Year Camera License for Government, Capacity Increase	\$1,499
LIC-CAM-10Y-CAP-G	10-Year Camera License for Government, Capacity Increase	\$2,999

Video Security Cloud License pricing (Renewal)

Model Number	Description	Cost (MSRP) USD
LIC-CAM-1Y-RNW	1-Year Camera License, Renewal	\$219
LIC-CAM-3Y-RNW	3-Year Camera License, Renewal	\$599
LIC-CAM-5Y-RNW	5-Year Camera License, Renewal	\$999
LIC-CAM-10Y-RNW	10-Year Camera License, Renewal	\$1,999
LIC-CAM-1Y-RNW-G	1-Year Camera License for Government, Renewal	\$329
LIC-CAM-3Y-RNW-G	3-Year Camera License for Government, Renewal	\$899
LIC-CAM-5Y-RNW-G	5-Year Camera License for Government, Renewal	\$1,499
LIC-CAM-10Y-RNW-G	10-Year Camera License for Government, Renewal	\$2,999



Ordering Information

Accessories pricing

Model Number	Description	Cost (MSRP) USD
ACC-CAM-SHIELD-1	Camera Weather Shield	\$79
ACC-MNT-ANGLE-1	Angle Mount	\$149
ACC-MNT-ARM-1	Arm Mount	\$99
ACC-MNT-CJBOX-1	Circle Junction Box	\$109
ACC-MNT-CLIP-1	Tile Clip Mount	\$99
ACC-MNT-CORNER-1	Corner Mount	\$199
ACC-MNT-PEND-1	Standard Pendant Cap	\$69
ACC-MNT-POLE-1	Pole Mount	\$209
ACC-MNT-UPEND-1	Umbrella Pendant Cap	\$79
INJ-POE-PLUS	PoE Plus (802.3at Type 2) Injector, GigE	\$129